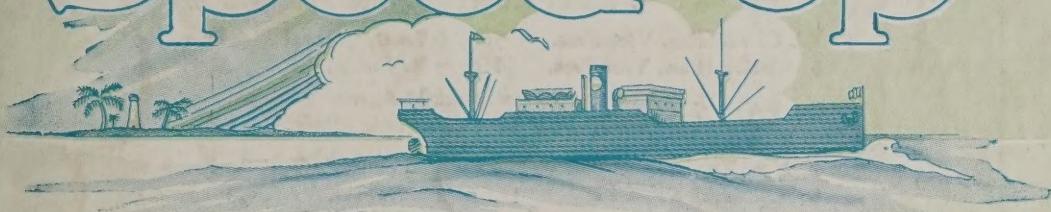


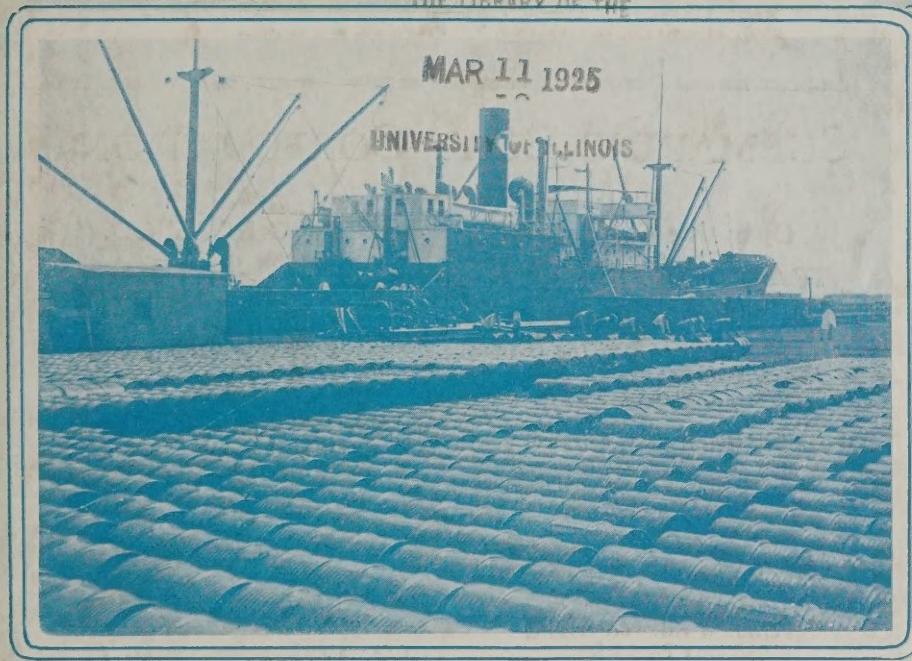
623.805

GET

Speed Up



THE LIBRARY OF THE



S. S. "SUCARSECO" DISCHARGING 1400 TONS OF FINISHED LUBRICATING
OIL AT TEXAS CITY, TEXAS, ONE OF THE LARGEST CONSIGNMENTS
OF THIS PRODUCT EVER RECEIVED AT A TEXAS PORT.

T**SBC****ED**

TRANSMARINE LINES

HENRY R. CARSE President

HENRY R. SUTPHEN Vice-President

W. C. Mueller, Vice-Pres. Joseph Scott, General Manager
S. MacClurkan, Vice-Pres. Henry R. Lewis, Op'tng Mgr.

J. E. Bishop, General Freight Agent

J. H. Muller, Jr., Manager Canal Division

New York Office
5 NASSAU STREET

Steamship Terminal
PORT NEWARK, N. J.

Offices in Buffalo, Beaumont, Chicago, Cleveland, Dallas, Fort Worth, Los Angeles, Mobile, Oakland, Pensacola, Port Arthur, Portland, Pittsburgh, San Antonio, San Francisco, and Seattle.

Nelseco**Elco**

SUBMARINE BOAT CORPORATION

Operating Companies

TRANSMARINE CORP.

Steamship Division—Weekly sailings from Port Newark to Gulf and Pacific Coast of the United States. Offices: 5 Nassau Street, New York; Terminal, Port Newark, N. J.

Canal Division—Regular service to Buffalo and West over New York State Barge Canal. Offices: 5 Nassau Street, New York.

Atlantic Port Railway

PORT NEWARK, N. J.

Terminal railroad serving
Port Newark

Newark Bay Terminal Corp.

PORT NEWARK, N. J.

Warehousing and Storage

ELECTRIC BOAT CO.

GROTON, CONN.

Holland Type Submarines

Manufacturing Companies

ELCO WORKS

Plant and Yacht Basin: Bayonne, N. J.

Division of Sales Exhibit, Port Elco:
247 Park Ave. and 107 E. 46th St.
New York City,

ELECTRO DYNAMIC CO.

BAYONNE, N. J.

Electric Motors and Generators

NEW LONDON SHIP & ENGINE COMPANY

GROTON, CONN.

New York Office: 247 Park Avenue

Nelseco Diesel Engines

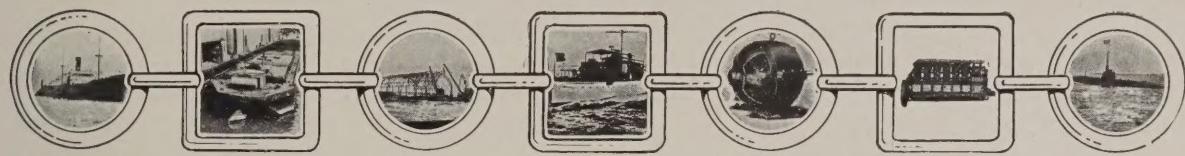
Executive Offices

5 Nassau Street :: New York City

APR**SBC****EBC**

SPEED-UP

OFFICIAL ORGAN OF THE SUBMARINE BOAT CORPORATION AND COMPONENT COMPANIES, NAMELY: NEWARK BAY SHIP-YARD, TRANSMARINE CORPORATION, ATLANTIC PORT RAILWAY, NEWARK BAY TERMINAL CORPORATION (OF PORT NEWARK, N. J.), ELCO WORKS, ELECTRO DYNAMIC COMPANY (OF BAYONNE, N. J.), NEW LONDON SHIP & ENGINE COMPANY AND ELECTRIC BOAT COMPANY (OF GROTON, CONN.). PUBLISHED MONTHLY AT 5 NASSAU ST., NEW YORK.



Vol. VIII

February, 1925

No. 1

Port Newark—A National Asset

P. H. W. Ross

Trade Consultant, Port Newark Terminal

PURCHASING necessities are predicated upon the existence of a dense, non-self-supporting population, such as is found within twelve miles of New York Harbor. These millions of residents are forced to buy practically every crumb of bread, every drop of milk, every egg, every apple, all their flour, meat and vegetables—in fact, everything that sustains life. Although in the suburbs a few householders raise vegetables and keep chickens, the proportion of citizens self-supporting in matters of food is so small as to be negligible.

The region also being devoid of coal, lumber, structural steel, wool, cotton, silk and all raw materials that enter into the provision of shelter and clothing, it follows that the purchasing necessities of these people are necessarily acute beyond those of any other region of similar area in the United States.

In addition to the purchasing necessities of the residents just alluded to, are those of the enormous total of world tonnage that enter the harbor of New York. Attracted by the buying power of some ten million people within short distance of New York Harbor, ships from all parts of the world enter New York Harbor heavily laden. Having discharged their inbound

freights, arrangements must be made for the purchase of outbound freights and also for the purchase of ships' supplies, for revictualling, for fuel, cordage and the innumerable commodities that are required for the life and maintenance of a ship.

Thus it will be seen that marketing facilities depend not merely on well arranged docks, quays and wharves, not solely on modern machinery and equipment for economically transferring commodities from railroad car to ship's hold, admirable and necessary as the facilities are, but on the purchasing necessities prevailing at the harbor where these transfers are made and to which point transportation is directed. This is the great prize that New York Harbor offers to the productive activities of our country.

Please let me emphasize this all-important fact: I am not pleading on behalf of those of our citizens who happen to live within that region. I speak for those who raise sheep; those who cut lumber; for the salmon fishing and fruit industries of the Pacific Coast; for Florida; for the farmers, miners and stockmen of the interior who by rail, river or coastwise sailing, must have better facilities for marketing their products either by sale to their fellow citizens or by trans-shipment abroad.

(Continued on page 2)

THE MARKETING REGION PAR EXCELLENCE

Unquestionably, the region in and around New York, Newark, Jersey City and other communities within twelve miles of the Statue of Liberty, constitutes the richest and most nearly perfect mart or market in the western hemisphere.

In the first place, more actual consumers live in that region than in any other of similar area in the United States.

In the second place, more buyers and sellers from other parts of the Union and of the world at large, visit that region and, consequently, add enormously to the purchasing power of the actual residents.

Moreover, for nearly 300 years the floating tonnage of the commercial world at large has made New York Harbor its principal port of call in this hemisphere.

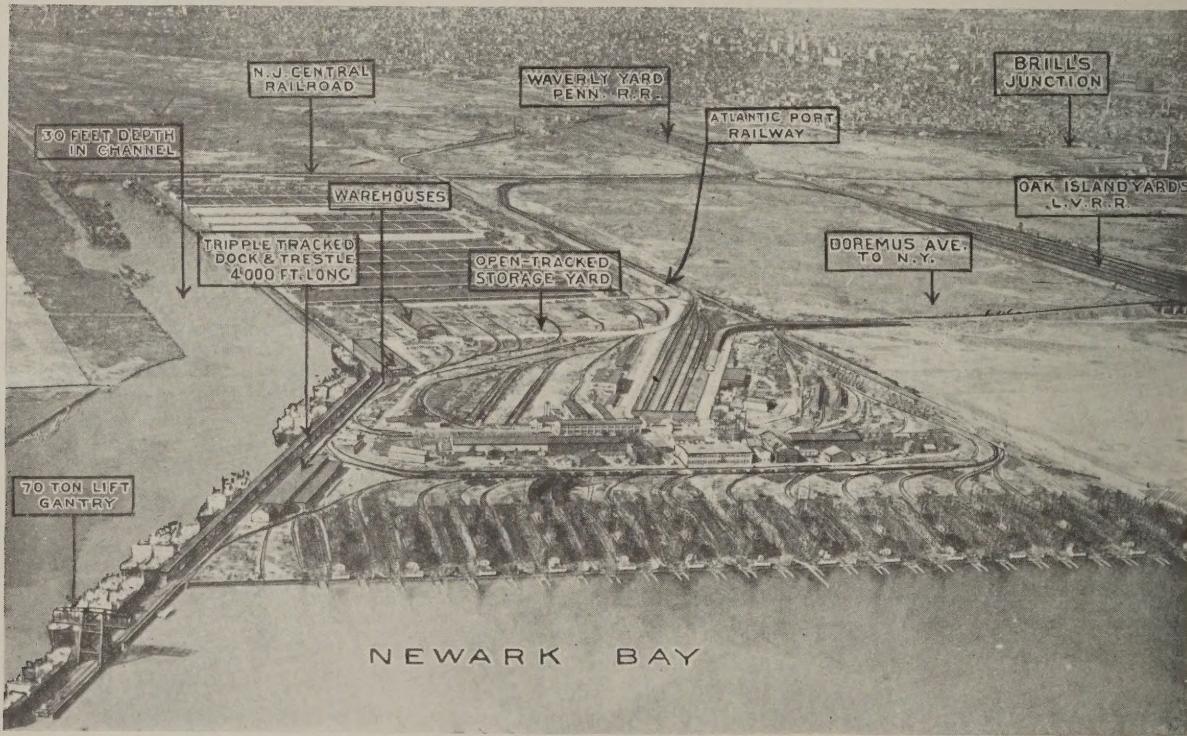
All of these reasons combined, together with many I have not enumerated, such as climate, the Hudson River, Long Island Sound and the fact that New York Harbor is ice-free, make that region an agreeable spot wherein to live and a profitable one wherein to trade.

Consequently, it is a matter of the utmost

importance to producers of all kinds of commodities, and particularly those embraced under the general heading of food, clothing and shelter (lumber, structural steel, brick, sand, cement) to have ready and cheap access to this most desirable location for the sale of their products.

THE APPROACHES THERETO

We have, therefore, to take note of the approaches to this desirable market. Here we find that, by reason of the tremendous increase of resident population and the necessary transportation of the people themselves from their homes to their stores and offices, such a congestion of traffic has arisen that the powers of New York Harbor to serve the requirements of inland producers in the transportation of their product from railroad to ship, either coast-wise or foreign-bound, is most seriously impaired. We therefore find that in order to make the greater New York Harbor a really efficient factor in the transfer of inland products from rail to ship, it is necessary to develop an approach from the west to Newark Bay, which is now a legal and integral part of the new New York Harbor.



NEWARK BAY TERMINAL — THE HOME OF THE TRANSMARINE LINES

THE TRANSMARINE FLEET

SUBOATCO	SUJERSEYCO	SURICO
SUCARSECO	SALANIERCO	SURICHCO
SUCUBACO	SUMANCO	SUSCOLANCO
SUDAWSONCO	SUNELSECO	SUSHERICO
SUDUFFCO	SUNEWARKCO	SUSPEARCO
SUDURCO	SUNEWCO	SUTERMCO
SUEDCO	SUNUGENTCO	SUTORPCO
SUELCO	SUPHENCO	SUTRANSO
SUGILLENCO	SUPORTCO	SUWARINCO
SUHOLCO	SURAILCO	SUWORDENCO
SUJAMECO	SUREMICO	

Each ship is 5350 deadweight tons Built at Newark Bay Shipyard.

Lloyd's Rating ♦ A-1, American Bureau ♦ 100 A-1

New Jersey is singularly blessed in the matter of waterways. With New York it shares the advantages of the Hudson River and it also shares the uses of the Barge Canal, thus giving Newark Bay unimpeded access to the Great Lakes as far west as Duluth, Minn.

With Pennsylvania, New Jersey shares the Delaware River with Chesapeake Bay, thus affording water transportation from Newark Bay to Baltimore.

It is most interesting to study the genesis of things. For years Newark Bay slumbered. Its quiet, shallow waters were rarely ruffled by the passage of ships. Newark, an ancient city, as American cities go, prospered greatly as a manufacturing center, and its people apparently never thought of the wonderful gift which nature had entrusted to their care. Fortunately, there were a few far-visioned men of Newark who glimpsed the possibilities of the maritime development of their great property and so, notwithstanding much local opposition, money was raised and a great waterfront terminal was created at Port Newark.

THE WAR CHANGED CONJECTURE TO PROOF

Then came the war—and the vision of Thomas L. Raymond and his colleagues was justified. The United States Government purchased a large tract of land from the City of Newark, spent some thirteen millions of dollars and built at Port Newark Terminal a great

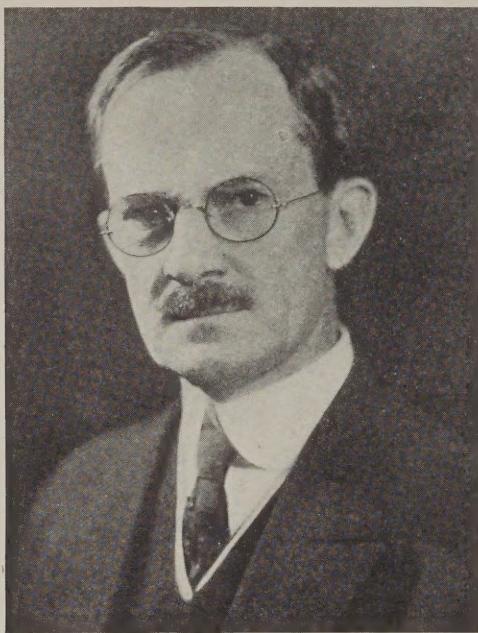
Army Supply Base which, because of its close conjunction with the terminals of many railroad companies located on Newark Bay, was able to and did successfully transport many millions of tons of munitions, stores and commodities from the United States to Europe.

These operations, according to Government authorities, were conducted more economically, more quickly, and with greater satisfaction from the Port Newark Terminal base than from any other in the United States, because of the reason already given, viz., the immediate juxtaposition of railroad to ship's keel. It must be remembered that railroads run on land and that, if you are going to transfer anything from a railroad car to a ship that is berthed at a government base on an island, as, for instance, at Brooklyn or Hog Island, you have a tremendous additional expense in moving your commodity from the mainland to the ship that is berthed at the said island. At Newark Bay all that additional expense and time was saved. These operations successfully proved that Newark Bay was no longer in the supposititious class.

An organization such as the Atlantic Deeper Waterways Association may ask, "What can we do?" To which I would reply that at present there exists a 30-foot channel about 400 feet wide leading into a basin about 600 feet wide where the wharves are located. The city of Newark has paid for the digging of this channel, but in order to make Newark Bay

(Continued on page 22)

Inland Waterways Progress



BY J. HAMPTON MOORE
President of the Atlantic Deeper Waterways Association



ATIONAL projects of a beneficial character must be agitated constantly. They are all more or less dependent upon such information and interest as the people themselves possess. But the great trouble about worthy national projects that require government assistance is, that that intangible public which is generally sympathetic, is content to go about its business and "let George do it." This "public spirit" which is enthusiastic for a moment and then fades away for a hundred reasons, was responsible for the organization in 1907 of the Atlantic Deeper Waterways Association. The central thought then was that a voluntary body, if formed for permanent service, might keep alive the enthusiasm for improved waterways along the Atlantic Coast that swept the Eastern states that year because of the inability of the railroads to keep up with the carrier business and to supply sufficient transportation for the movement of the country's

products. Even James J. Hill in that year advocated the deepening of the Mississippi River from the Lakes to the Gulf to "relieve" railroad congestion. Well, the business of the country has grown apace, we have participated in a great World War, our population has steadily increased, and yet we have not been amply provided with transportation facilities by rail or water or even by aeroplane to keep up with the agricultural and industrial procession.

All this was foreseen in 1907, when the problem of transportation, which is the life of trade, was up for solution. Those of us in the East who studied our national legislative conditions observed the activity of our Western friends in obtaining appropriations for rivers and harbors, as they were also being obtained along the Great Lakes and the Gulf, with a view to the setting up of two means of communication where one had existed before. We noted the apparent indifference of the East to this situation and finally came to the conclusion

that a movement along the Atlantic seaboard was necessary almost as a matter of protection. We were not getting our share of Federal consideration for our rivers and harbors, many of which were falling into disuse or becoming unfit for any sort of transportation.

The movement had its inception in an agitation for a deeper Delaware River, which separates the State of New Jersey from the States of Pennsylvania and Delaware. There had been a 26-foot channel in the Delaware from Philadelphia to the Sea, and a deeper channel was demanded, but it was found in Congress that the Delaware would not get along so well by itself as if its advocates combined with the advocates of other streams demanding improvement. It is not now necessary to recite history, but the fact is that with the formation of the Association and the union of voluntary forces all along the coast from Maine to Florida, hundreds of streams and ports began to receive attention. Increased appropriations were obtained and a general advance in all lines of industry ensued. Using the Delaware River as an example, a 35-foot channel, rather than a 30-foot channel, from Philadelphia to the Sea, was secured, so that before the World War broke out that splendid river had become a highway for the ships of the world and ultimately an industrial and shipping center, having as many as 156 ship ways in operation at one time. The taking over of the Chesapeake and Albemarle Canal and connections from Hampton Roads to the Atlantic Ocean below Cape Hatteras was followed up by the Federal acquisition of the Chesapeake and Delaware Canal, connecting points north of Philadelphia inland with the Chesapeake Bay, and private enterprise was induced to construct a canal across Cape Cod, which rendered excellent service during the War. Everywhere along the coast, the communities were inspired to go forward with their waterway development projects in preparation for increased business. Portland, Boston, Providence, New London, New York, points along the Hudson River, Newark, Trenton, New Jersey, Philadelphia, Wilmington, Del., Baltimore, Chesapeake Bay points, Norfolk, Wilmington, N. C., Savannah, Jacksonville, Miami, Key West and numerous intervening points all felt the beneficial effect of what might be called the "community of

interest agitation" of the Association. In short, while we cannot claim credit for it all and have no desire to take the credit from any particular State or district, or from any senator or member of Congress, the fact remains that whereas congressional appropriations for all rivers and harbors up to 1907 were approximately Five Hundred and Fifty Million Dollars, an insignificant sum as compared with certain other departmental expenses of the government, they increased to a total of more than twice that sum since the Association was formed. It was agitation and keeping everlastingly at it that produced these results. And satisfactory as they have been, hundreds of thousands, and perhaps millions of people, who are the direct beneficiaries in business and otherwise of the improvements thus secured, know nothing about the work nor in any way contribute to it. They are simply content to "let George do it" and go their way, many of them in their yachts taking advantage of the streams that have been opened, of the canals that have been provided, and of the ports that have been made navigable and safe. In spite of this indifference the good work goes on.

From year to year, waterway conventions have been held along the coast, doing what they could to arouse interest in the general project of an inside passage way for barges and ships from New England to Florida. The plan of holding annual conventions has had much to do with keeping alive the public spirit that is necessary if the waterways are to be kept open and if channels for commerce in territory frequently not covered by railroads, are to be maintained. In the discussions over projects and problems that come up from various parts of the coast, there is always information and food for thought, if not for inspiration. When the Association was formed, for instance, there was no "Port Newark" as it is known today. The business around the port of New York was so big and possibly so complacent because of the deep entrance to the great metropolis which attracted the bulk of American shipping, that it gave little heed to Newark's opportunities. Adjacent waterways, many of them feeders of the biggest port received scant, if any, consideration from the Federal govern-

(Continued on page 22)

Importance of Waterway Development to Newark

By EDMUND W. WOLLMUTH

Executive Secretary of the Chamber of Commerce of the City of Newark, N. J.



WHILE interest in waterway development, insofar as Newark is concerned, has centered mostly in the Port Newark project during the last decade, it is a noteworthy fact that the Chamber of Commerce has been constantly active in respect to better waterway facilities during its entire existence. Incorporated in 1869, one of the first activities of the organization that year was a demand for the widening of the drawbridge spans on the Passaic River, thus improving navigation. In this effort the demand met with success.

A brief recounting of accomplishments in waterway development in which the Chamber of Commerce played an active part shows that in 1874 the Chamber was instrumental in bringing about the construction of a Government dyke in Newark Bay. Four years later opposition by the Chamber prevented the closing of drawbridges during the winter, a recognition of the inestimable value of unimpeded waterway transportation.

In 1880 efforts of the Chamber were rewarded with obtaining a Congressional appropriation of \$32,000 for Passaic River improvement and in 1884 an additional appropriation of \$80,000 for the improvement of the river and Newark Bay.

With the idea in mind of developing the facilities for better navigation of the Passaic a minimum width of 80 feet for draws over the Passaic River was obtained at the beginning of this century, while in 1905 an appropriation was obtained for a twelve foot depth in the river.

During this period which brings us up to the last two decades the City of Newark had grown to be an important industrial center, and through the efforts of the Chamber the transportation facilities of the Passaic River

and Newark Bay had been kept abreast of the city's industrial requirements.

Interest in intra-coastal waterways was evidenced in the action of the Chamber in 1913 when the intra-coastal ship canal project to connect the waters of the metropolitan district with the Delaware River was advocated. In this the Chamber recognized the project for a ship canal across New Jersey as one of great importance and value to the future interests of the State and as a result petitioned the Congressional Committee on Appropriations for the completion of the survey and the location of monuments.

Through the Rivers and Harbors Committee of the Chamber endorsement was given in 1914 to the Federal project of improving the channel of Newark Bay to a 20 foot depth and 300 foot width. This was the start which led to the further development by the city resulting in the Port Newark of today. But despite the fact that the waterway development, which has made Newark one of the foremost ports of entry on the Atlantic seaboard, represents upward of \$8,000,000, the work has only just begun.

Due to the natural advantages of location and its excellent transportation facilities, Newark, during the last twenty years has experienced a remarkable growth in industry, and with this is closely knit the development of its port. Nor is this phenomenal trend of industrial development to stop as Newark is destined to become the foremost Eastern center of production and distribution.

In visualizing the necessity of greater waterway facilities, the fact was not overlooked that a demand for industrial sites would follow as a natural consequence. With the dredging of the channel the fill was utilized in the reclama-

(Continued on page 22)

The Motorship "Ambassador"



THE MOTORSHIP "AMBASSADOR," EQUIPPED WITH A 360 HP NELSECO DIESEL ENGINE



HE New London Ship & Engine Company has just received a letter from its representative on the West Coast which gives some details on the motorship *Ambassador*, a vessel powered with a 360 S.H.P.—Nelseco Diesel engine. The *Ambassador* was built by the Tacoma Shipbuilding Company in 1919 and has the following general specifications:

Length over all.....	112'
Beam over all.....	22'
Draft loaded.....	10'7"
Her gross tonnage is 204, net 122 and has a carrying capacity of 100 tons.	

On her initial trial trip she developed a speed of 11 knots in a light condition. Her power equipment consists of one 360 S.H.P., 6 cylinder, 4 cycle direct reversible Nelseco engine direct connected to the propeller shaft. The *Ambassa-*

dor was built for the Chichagoff Mining Company of Tacoma, Washington, and has been in their service until a month ago, when she was sold. During this period, she has engaged in passenger and general freight carrying and has been of valuable service to her owners, especially due to her capacity to go long distances on a single fuelling. In the North West, this is a valuable asset as the mining districts are frequently located a considerable distance from ports where fuel is obtainable.

A short time ago this vessel was purchased by the Inter-Island Steam Navigation Company of Honolulu, Hawaii. A survey of the engine and vessel was made before purchasing and although she has passed through five very strenuous years of service, everything was found in excellent condition. It was considered advisable to make certain repairs and adjustments to the engine, but as these were of a

minor nature, it was decided to send the boat to Honolulu before effecting same.

Mr. Ferd Hons, Assistant Manager of the Inter-Island Steam Navigation Company in commenting upon the *Ambassador* and her trip writes in part:

"No doubt you have seen from Marine Publication that our Company has purchased the Mine Tender *Ambassador* which after an uneventful trip of 12 days and 18 hours, arrived at Honolulu on October 31.

We are very much pleased with our purchase and feel that we will get good service from this vessel on account of her combined freight and passenger and towing facilities. According to the Chief's statement to us, the engine performed perfectly during the entire trip, no stopping of the engine having been necessary, except just a few hours prior to her docking when the breaking of a belt caused the shutting down of the engine for the purpose of belt replacement.

We feel that you are naturally interested in this vessel and would be interested to hear of her performance for the long 2500 mile trip."

The transfer of the *Ambassador* to Eastern Pacific waters will further, to a large extent, the acceptance and use of Diesel engines in the Hawaiian Islands. To the best of our knowledge this is the first ocean going vessel to be utilized exclusively among the Islands.

MOTORSHIP "AMBASSADOR"

Built—1919, Tacoma Shipbuilding Co.
Owners—Inter-Island Navigation Co.

SPECIFICATIONS:

L.O.A.—112' 0"
Beam O.A.—22' 0"
Mld. depth—16' 3"
Draft Loaded—10' 7"

TONNAGE:

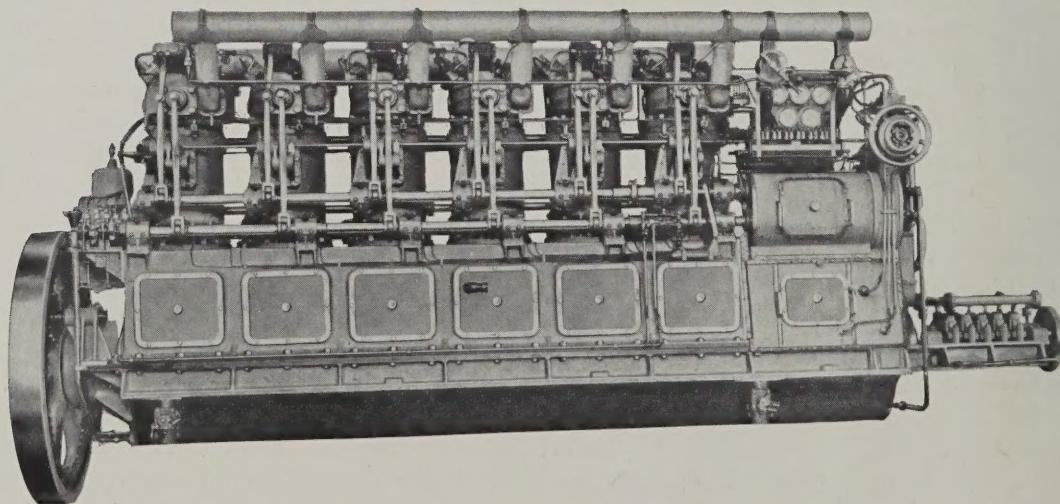
Deadweight—100
Gross—204
Net—122
Speed Light—11 knots
Fuel Oil Capacity—2,000 gals.
Lubrication Oil Capacity—200 gals.
Propeller—3 blades (bronze)

ENGINE:

Type—4-cycle Diesel
Make—New London Ship & Engine Co.
Shaft Horsepower—360
Revolutions per min.—240
No. of cylinders—6
Directly reversible by air
Weight—57,800 lbs.

AUX. EQUIPMENT:

1—16 H.P. Atlas engine driving 12 k.w. generator for furnishing current for bilge pump, air compressor, cargo winch and windlass.



TYPE OF NELSECO ENGINE INSTALLED ON MOTORSHIP "AMBASSADOR"

A Few Nelseco Installations



PANORAMIC VIEW OF THE NEW LONDON SHIP & ENGINE COMPANY PLANT AT GROTON, CONN.

TRANSCO 1—Tugboat—Operated by Transmarine Corporation, New York City. Commissioned, 1922. Length Over All 60', Beam 16', Draft 8'. Powered with one 180 Shaft Horse Power, direct reversible Nelseco Diesel engine. Has been in continuous operation on the New York State Barge Canal during the period the Canal is open. During the winter time this tug operates in the Transmarine service in and around New York Harbor.

TRANSCO 2 and *TRANSCO 3*—Tugboats—These tugs are sister vessels and are operated by the Transmarine Corporation, New York City. They were both commissioned in 1922 at Kingston, New York. Length Over All 67'6", Beam 17'6", Draft 8'. Each powered with one 240 Shaft Horse Power Nelseco Diesel engine, direct reversible. These tugs have been working on the New York State Barge Canal during the period the Canal is open and during the winter time operate in the vicinity of New York Harbor.

TRANSCO 4 and *TRANSCO 5*—Tugboats—These tugs are sister vessels and are operated by the Transmarine Corporation, New York City. Commissioned in 1923. Length Over All 63', Beam 17'6", Draft 8'. Each tug powered with one 180 Shaft Horse Power, direct reversible Nelseco Diesel engine. At the present writing, these tugs have completed 3 seasons on the Canal and during the winter time are employed in work around New York Harbor.

MUNNATAWKET—Passenger Boat—Owned by Fishers Island Navigation Company, Fishers Island, New York. Commissioned, 1923. Length Over All 117', Beam 22'4", Draft 8'5", speed 10½ knots. Powered with one 240 Shaft Horse Power Nelseco Direct reversible engine. The *Munnatawket* was converted from steam to Diesel drive at the plant of the New London Ship & Engine Company, Groton, Conn. Since conversion she has been operating with greatly reduced fuel and labor costs and has been plying regularly between New London and Fishers Island.

ALERT—Tugboat—Owners—Merritt, Chapman & Scott Corp., New York City. Commissioned, March, 1924. Length Over All 99', registered 90', Beam 20', Draft 8'. Powered with one 330 Shaft Horse Power direct reversible Nelseco Diesel engine. The *Alert* was converted from steam to Diesel drive at the plant of the New London Ship & Engine Company, Groton, Conn. Since conversion she has been employed in 24 hour service and operates between Boston, New London and New York in general towing work. It is needless to say that the owners are greatly impressed by the economies in fuel and labor costs which have been experienced with this boat.

NENEMOOOSHA II—Yacht—Owned by Alfred I. DuPont, Wilmington, Delaware. Length Over All 118', Beam 20', Draft 6', Powered with two 180 Shaft Horse Power direct reversible Nelseco Diesel engines. Mr. DuPont's yacht is now nearing completion at the Newport

(Continued on Page 20)

Transmarine Lines Standardized Steel Steamer



Seven-foot Model of Standardized Ship, 5,350 d. w. Tons.

Dimensions and General Information

Length, Overall	335'6"	Boilers	Two B. & W. Water Tube
Length, B. P.	324'0"	Steam Pressure	200 Lbs.
Beam—moulded	46'0"	Fuel	Oil or Coal
Depth—moulded	28'6"	Power Plant	Westinghouse Steam Turbine and Falk Reduction Gear
Draft—loaded, about	23'0"	Shaft H. P.	1,500
Displacement—loaded	7,615 Tons	R. P. M. of Turbine	3,600
Block Coefficient	0.772	Shaft R. P. M.	90
Gross Tonnage	3,545	Speed	10½ Knots
Net Tonnage	2,174	Classification	Lloyds $\frac{1}{2}$ 100A1
D. W. Capacity	5,350 Tons	American Bureau $\frac{1}{2}$ A1	
Bunker Capacity			
	198,000 Gals. Oil in Double Bottoms and After Peak		
	103,170 Gals. Oil in Deep Tank, or 943 Tons Coal.		

General Description

SHAPE—

37% parallel middle body.
No dead rise in bottom.
No tumble home in sides.
No turned down margin. Tank top carried flat to ship's side all fore and aft.

Hold drainage goes to bilge wells between the floors at the after end of each hold.

No crown in decks.

Straight line shear in upper deck from forward end of No. 2 hatch to stem.

None of the above features are in any way detrimental to the ship from an operating standpoint; all are beneficial from the standpoint of simplicity and cheapness of construction and cheapness of repairs.

FUEL CARRYING ARRANGEMENTS—

Vessels arranged and equipped for burning either oil or coal.

Can be changed over from oil burning to coal burning in 24 hours.

Oil carried in double bottom and in after peak.

Coal carried in No. 3 hold and in part of bridge enclosure.

Oil capacity of 301,970 gals. (using double bottoms, after peak and deep tanks) gives steaming radius in excess of 13,000 miles.

Coal capacity of 943 tons gives steaming radius of 7,750 miles.

Combined coal and oil capacity gives steaming radius of over 18,000 miles.

WATER AND TRIMMING TANKS, ETC.—

Reserve feed water carried in double bottom.

Fore peak arranged as a salt water trimming tank.

All double bottom tanks and after peak may be used as salt water ballast tanks when not carrying oil.

Deep tank in lower part of No. 3 hold arranged for salt water ballast or fuel oil.

CARGO STORAGE AND HANDLING—

Five cargo holds.
Holds Nos. 1, 3 and 5 divided in height by an intermediate deck.

Bridge enclosure may be used for cargo.

Total bale cubic, 226,150 cu. ft.

Total grain cubic, 269,600 cu. ft.

Hatches for holds Nos. 1, 2, 4 and 5 each served by two 5-ton booms.

Hatch for hold No. 3 and bridge enclosure served by two 1½-ton booms.

ERECTIONS—

Forecastle used for store rooms.
Poop used for firemen's and seamen's quarters.

Forward bridge deck house contains saloon and deck officers' quarters.

After bridge deck house, starboard side, contains engineer officers' quarters.

After bridge deck house, port side, contains petty officers' quarters.

After bridge deck house, amidships, contains galley and mess rooms.

House on upper bridge deck contains chart room, wheel room and captain's office.

House on boat deck contains hospital and wireless rooms.

SPECIAL FEATURES—

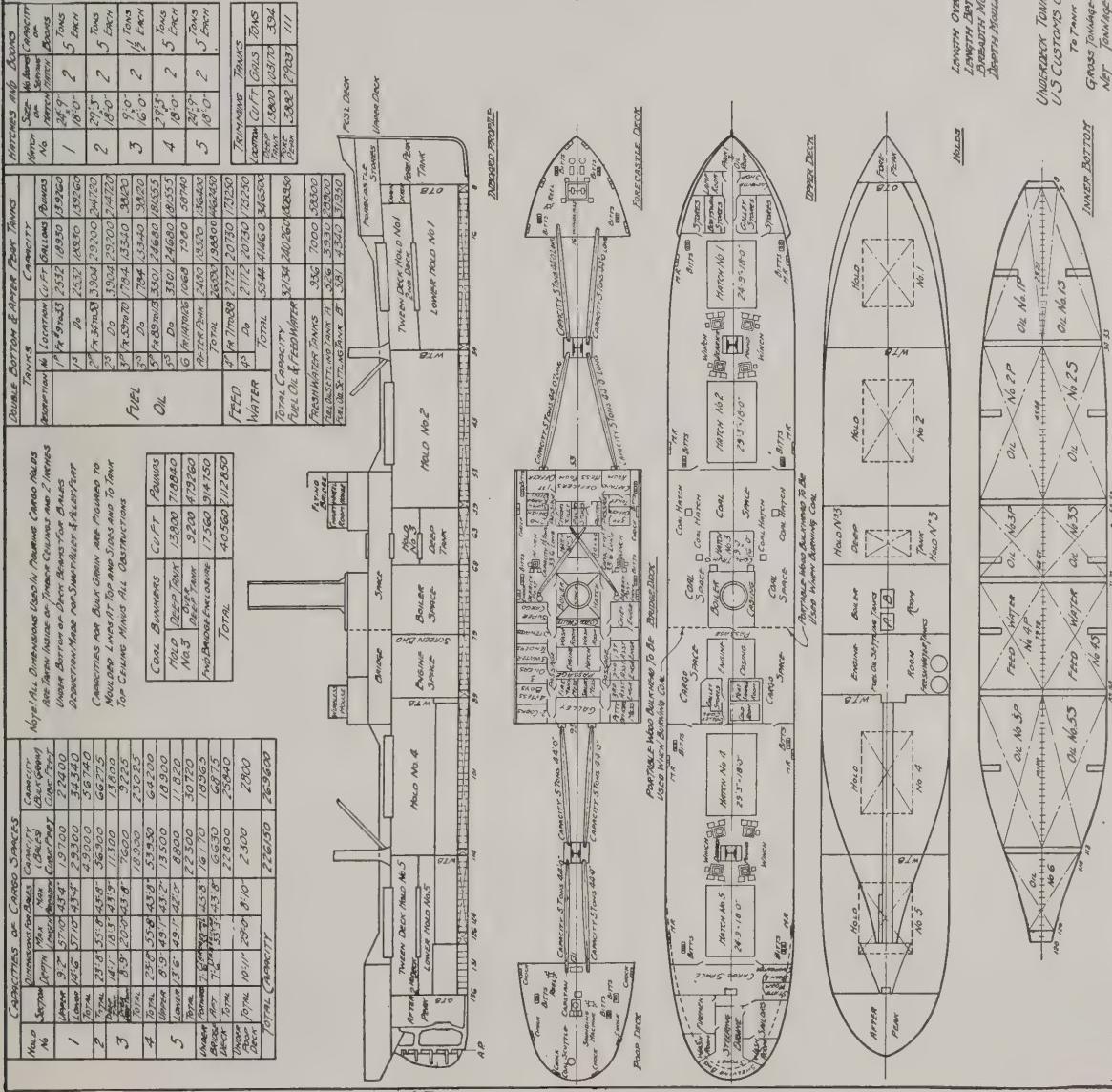
Exceptionally comfortable quarters.
Showers with hot and cold water in all washrooms.
Lavatory in each stateroom.
Electric lights throughout ship.
Steam heat in all quarters.
Refrigerator plant and large cold room for ship's perishable supplies.

DESIGNER—Theodore E. Ferris.

Capacity Plan of Transmarine Line Ships

Measurement	Diameter	Thickness	Area
1			
2			
3	.25		
4			
5	.24 .55		
5	.5500	.23 .51 .3	
6			
7	.5000	.22 .510	
8			
9	.4500	.21 .508	
9			
10	.4000	.20 .505	
10			
11	.3500	.19 .502	
11			
12	.3000	.18 .500	
12			
13	.2500	.17 .495	
13			
14	.2500	.15 .497	
14			
15	.2000	.14 .490	
15			
16	.1500	.13 .487	
16			
17	.12 .283	.12 .285	
17			
18			
18	.1000	.11 .281	
19			
19			
20			
20	.500	.10 .278	
21			
21	0	.9 .275	

Hause
 LANSING ONE ALL. 3.
 LANSING, MICHIGAN,
 BROTHERS HOWELL
 DENTAL MANUFACTURERS OF SPANISH
 UNIVERSAL TUNGSTEN ASSOCIATED
 U.S. CUSTOMS OFFICES 3924
 To whom sent: 3924
 GRASS TUNGSTEN
 NET TUNGSTEN
 LUMIN BOTTLES



Port Newark—the Commercial

Direct Rail and Transmarine Steamer Connections — M



'Hub of the Port of New York

Motor Truck Service - Open and Sheltered Storage Space



SPEED-UP

SPEED-UP is the official organ of the Submarine Boat Corporation. It is published monthly at New York in the interests of its component companies, namely, Newark Bay Shipyard, The Transmarine Corporation, The Atlantic Port Railway, The Newark Bay Terminal Corporation (all located at Port Newark), the Elco Works and the Electro Dynamic Company, both of Bayonne, and the New London Ship and Engine Company and the Electric Boat Company, of Groton, Conn. All articles, pictures and cartoons are protected by copyright, and cannot be republished without the customary credit line. Address all communications to the Editor, care of the Submarine Boat Corporation, 5 Nassau St., New York, N. Y.

COPYRIGHT 1925. SUBMARINE BOAT CORPORATION

INLAND WATERWAYS AND NATIONAL DEFENSE

MOST instruments of National Defense are investments for destruction. But there is one which is essentially constructive and lifegiving—the inland waterways of the country.

In time of war they are the watery highways which can transport food, and material and even men for defense of the interior. Were it not for its inland waterways, Germany could never have held the Allied Armies at bay for four years. By transporting food and material through her inland canals, her railroads were free to ship her large Armies from the East to the West front, wherever they were needed. Even during the War when her wealth was sorely needed for military purposes, Germany spent large sums of money on her inland waterways.

Surely this should be a lesson to us. We who are blessed with such waterways should stop neglecting them and remember that water transportation is not only needed for defense, but that it also is the

cheapest form of transportation known to man.

In the development of water transportation America has been the reactionary, and Europe the progressive.

Wake Up, America, and realize the the commercial and industrial possibilities in your waterways.

ONE HUNDRED YEARS OF THE ERIE CANAL

NEW YORK owes much of its prestige as the Empire State of the Union to the Erie Canal.

The opening of the Canal in 1825, was signalized by a celebration in which Governor George Clinton came down the Canal by boat from Buffalo to New York and poured the waters of Lake Erie into New York Harbor.

The event was celebrated throughout the State, especially along the Canal, and the Hudson River in New York City. Booms of cannon announced the coming of Clinton, and his progress was greeted with enthusiasm by the citizens of the State.

A century of the Canal has passed. It has more than realized the vision and the hope of its builders. The canal has been the only water link between the Middle West and the Atlantic Seaboard. It had channelled the trade of the Middle West, of the Mississippi Gulf States and the Atlantic Seaboard eastward to the Port of New York, and helped build the great metropolis of the Nation.

It was fitting, therefore, that the Legislature of 1924, should, under Chapter 233 of its law, create a commission which was charged with the duty of arranging preliminary details, devising ways and means, and adopting plans for



THE NEW DIESEL TUG "LION," EQUIPPED WITH A 600 SHP NELSECO DIESEL OIL ENGINE

a proper celebration in 1925 of the centennial of the opening of the old Erie Canal.

The law properly directs the commission to plan and arrange a celebration that will not only be a memorial of a great historic event, but the occasion for forcefully bringing to the minds of the business world the benefits to accrue from a wider and larger use of the Canal as a means of transportation. The commission is required to make a report of its proceedings to the Legislature and the Governor not later than March 1st, 1925.

The following are the members of the Commission:

Chairman—George Clinton of Buffalo.

1st Vice-President—William J. Roche of Troy.

2nd Vice-President—Dr. Henry Moskowitz of New York.

The Legislative members include:

Robert C. Lacey of Buffalo.

John P. Ryan of Troy

Theodore D. Robinson of Mohawk.

Gilbert L. Lewis of Rochester.

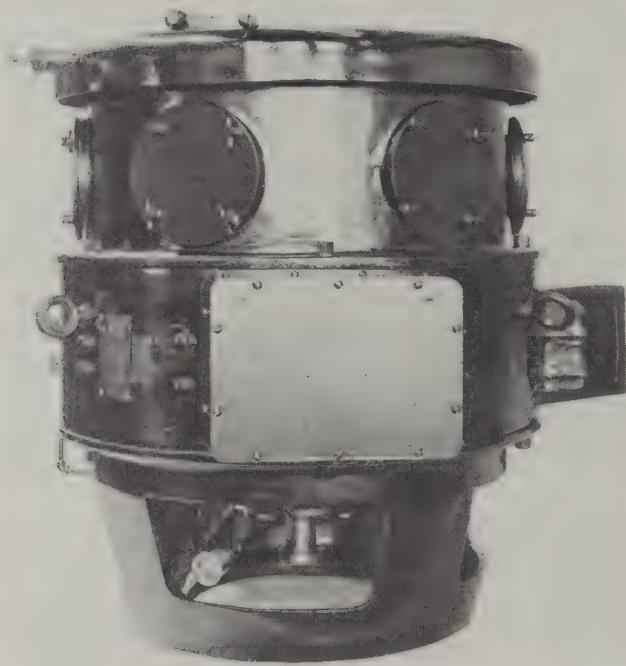
William J. Hickey of Buffalo.

Alfred J. Kennedy of Whitestone.

This celebration will not only signalize an important historical event, but it will help to stimulate an interest in the wide use of the new barge canal by the shippers, not only of the State of New York, but of the Nation, as far as the Mississippi River.

The New Diesel Tug "Lion," a photograph of which appears above, is the latest addition to the Transmarine Lines' Towing Fleet. The tug is 103 feet in length, has a beam of 26 feet and is equipped with a 600 SHP Nelseco Diesel Oil Engine, built and installed by The New London Ship & Engine Co., Groton, Connecticut.

Electro Dynamic Motors on U. S. Submarines VI-V3



60 HP MAIN DRAINAGE VERTICAL MOTOR PUMP

THE launching at the Portsmouth N. H. Navy Yard of the sea going submarine V-1 marked another epoch in the rapid progress made in the construction of under-seas vessels, since the time Holland demonstrated its possibilities. The growth of the submarine parallels the growth of the Electro Dynamic Company who have been prominent with submarine electric motor installations from its infancy. The Navy Department have learned from years' experience that the Electro Dynamic Company product is always reliable and have approved it for this most severe service. Electro Dynamic Motors are associated with nearly all submarines ever constructed in the United States.

The V-1 is the first of nine vessels authorized by the act of Congress, August 29, 1916, al-

though only three vessels are being constructed at this time. Her keel was laid October 20th, 1921, but work was curtailed due to lack of funds. It is expected the V-1 will be in full commission before January 1st, 1925. The V-1 is the first of a new class of large sea-going submarines, designed primarily to accompany the Fleet, being the largest so far laid down. She will be assigned to the Battle fleet and be self sustaining so that long cruises can be made without undue hardships and with the maximum of comfort for both officers and crew consisting of seven officers and eighty men.

The principal characteristics of the V-1 are as follows:

Length Overall.....	341½ Feet
Breadth, maximum.....	27½ Feet
Displacement, Surface.....	2164 Tons
Contract Speed, surface.....	21 Knots
	submerged.....9 Knots

Shafts.....	2
Revolutions.....	325
Torpedo Tubes.....	6
Five-inch gun.....	1

As is customary on submarines all the auxiliary machinery will be driven by electricity. Cooking is done on electric range and in electrically heated kettles.

There are over thirty Electro Dynamic specially designed motors on each vessel for twenty different applications as shown in the accompanying tables. The horse powers range from $\frac{1}{2}$ to 80 horse power. In the case of the 60 horse power vertical main drainage pump motors shown in the cut, a complete new design was worked out after factory tests had been made on a similar motor removed from one of the Ex-German Submarines. As speed was an important factor the physical dimensions

of the new design could not exceed those of the Ex-German Motor. When the motors were officially tested they showed better operating characteristics and a ten degree lower temperature rise than the Ex-German Submarine Motor under the same conditions.

It is to be noted that all of the motors are of the ball bearing type which the Electro Dynamic Company have been using for over twenty-one years and for which the Navy Department express a preference. For some purposes the motors are totally enclosed watertight, but in most applications the enclosed watertight design is opened on the front end, for air intake which is exhausted on the coupling end by a fan.

This design is entirely drip proof but permits the smallest frame size for the required horse power output.

ELECTRO DYNAMIC CO. MOTORS ON V SUBMARINES—NUMBER REQUIRED PER SHIP

Application	Quan.	H.P.	R.P.M.	Frame Size	Remarks
Air Compressor	2	80	550/730	30-S	Semi-Enclosed
Main Drainage Pumps	1	60	1800/2000	MV-60	Self-Ventilated
Secondary Drainage Pumps	1	12	1150/1450	7½S	Water Tight
Aux. Lub. and Circ. Pumps	1	20	1450/1900	5-S	Self-Ventilated
Anchor Windlass and Forward Capstan	1	30	850	10-S	Self-Ventilated
Steering Gear	1	15	450	10-S	Self-Ventilated
Hydraulic Power Plant	1	15	450	10-S	Self-Ventilated
Tilting Stern Plane and Stern Capstan	1	15	600	7½S	Self-Ventilated
Tilting Bow Plane	1	10	600	5-S	Self-Ventilated
Rigging Bow Plane	1	10	825	2-S	Semi-Enclosed
Ventilation	4	7.1	1200/1680	5-S	Water Tight
Trimming Pumps	2	15	1500	3-S	Self-Ventilated
Sump Pump	2	½	1200	92-E	Water Tight
Oil Purifiers	2	2	1750	1-S	Water Tight
Machine Lathe	1	3	500/1500	2-S	Water Tight
Refrigeration	2	2	1150	1-S	Water Tight
Refrigeration	4	½	1750	91-E	Water Tight
Refrigeration	1	1	1750	111-E	Water Tight



SUBMARINE ON THE NELSECO MARINE RAILWAY AT GROTON ON THE THAMES RIVER

The New Elco Product



26-FOOT ELCO CRUISER — SPEED 9 MILES

NO sport offers quite the satisfaction or quite the pleasant memories at the end of the vacation season, whether it be on the Sound in summer or Florida waters in winter, as those days afloat. Free from the irksome restrictions of the conventional "vacation," one may loaf luxuriously through days of perfect contentment, in a wonderful traveling "Home Afloat," over the many beautiful cruising grounds with which this country is so happily endowed.

While many would like to cruise, they have been deterred by the difficulty of securing a boat in which they could feel sure of obtaining satisfaction, and assurance of suitability. They have hesitated, too, at the price frequently asked for boats of unseaworthy form, and general unfitness.

For these people—thousands of them—the Elco Works of Bayonne, N. J., have designed and built a new **Standardized** motor boat—a cruiser. Many will recognize, in the development of this boat, another important achievement by Elco. Nothing like it has been before offered the motor-boating public.

It is, primarily, a real boat. By this is meant a boat which is an astonishing revelation of what can be done in a limited space. This new cruiser, just under 26 feet in length, offers accommodations and usable room not to be looked for in the average 30-footer. In this boat, you can cruise in comfort.

The cockpit is big; spacious enough for a large party. Ten persons find plenty of room for themselves. The cabin has excellent headroom, even the taller men moving about in comfort. In most small boats, when equal headroom is obtained, it is only done by exaggerating the freeboard. This produces a top-heavy, slab-sided condition which looks, as it actually is, anything but seaworthy. The floor space is generous; the cabin has lots of room in which to walk around, and there are two good berths, wide enough to make extensions unnecessary. Extra stowage space is located under the berths, with room for two upper berths when desired.

The galley is at the after end of the cabin. It is necessarily compact, but it includes the cruising essentials, a sink with running water, drain board, shelves, and a stove bench. On the starboard side, opposite the galley, is room for an ice box and a large hanging space with room

for all the "oilers" and extra clothing. The bow of the boat is occupied by the toilet room, which is equipped with a highgrade closet, properly installed. There is more hanging space here, and the room is well ventilated by the portlight and deck hatch. Still further forward is the rope locker.

The engine is concealed, yet perfectly accessible, under the cockpit floor. Operation is simplified by the Elco system of concentrated controls, which places everything directly at the helmsman's hand, rendering maneuvering easy for anyone. The boat is remarkable in its obedience to the helm. Due to its careful modeling and efficient hull, it is very clean-running, leaving almost no wave, and making excellent speed.

The performance of the boat in heavy seas is an agreeable surprise to those who have been accustomed to the sharp action of narrow, shallow boats—ofttimes with flat bottoms, no deadrise, and other makeshift hull forms, usually unsuited to any, but for quiet waters. The new

26-foot Elco Cruiser is of regular shipshape lines; deep and full-bodied.

The power plant is the Elco-Gray Marine Engine, built especially for this boat, has ample power to handle the boat in any situation. It has been selected only after an extended series of tests with a number of other engines, and is confidently offered as entirely satisfactory for the service demanded. It has a dependable reverse gear, reliable ignition, efficient manifolding and carburetion, and develops its power at moderate revolutions and low fuel consumption. An electric starter is regular equipment.

Little labor is involved in the proper up-keep of the Elco 26-footer. Each fitting is designed to combine the utmost utility with the minimum of work in polishing, and the like. The rudder gear and engine equipment are all Elco-built and **Standardized**. Duplicate parts are always carried in stock, instantly obtainable, and easily installed.

The success which Elco boats have attained indicate that a large demand for this newest boat is a practical certainty.

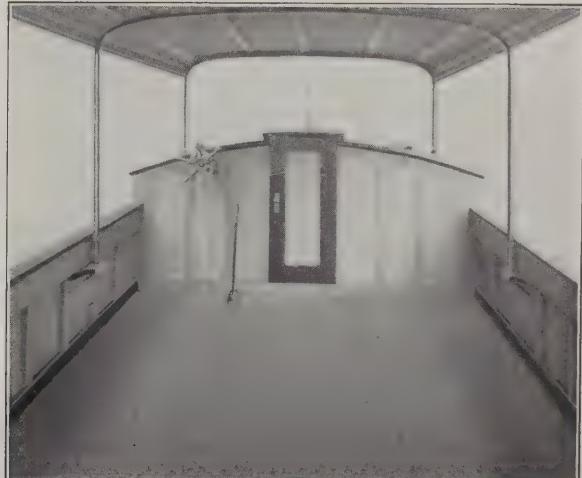
26-foot Cruiser Specifications—Model 26—Series 25

Length, overall	25 feet 11 inches
Beam, extreme	8 feet 8 inches
Draft	2 feet 3 inches
Sleeping accommodations	2 persons
Headroom, cabin	5 feet 8 inches
Speed	9 miles per hour

Engine	Gray-Model Z, Four cylinder
Bore and Stroke	$3\frac{1}{2}''$ x 4"
Horsepower, rated	12-18 HP
Reverse Gear	Planetary
Ignition	Battery
Fuel tank, capacity	25 gallons



CABIN — 26-FOOT CRUISER



COCKPIT — 26-FOOT CRUISER

A FEW NELSECO INSTALLATIONS

(Continued from page 9)

News Shipbuilding & Dry Dock Company, Newport News, Va. The *Nenemoosha I*—Mr. DuPont's former yacht—was also equipped with two Nelseco engines but of smaller capacity.

JUMBO—Tugboat—Owned by Cornell Steamboat Company, New York City. Commissioned, 1923. Length Over All 103', Beam 26', Mean Draft 11'. Powered with one 600 Shaft Horse Power Direct reversible Nelseco Diesel engine. After being commissioned the *Jumbo* worked in New York Harbor until the opening of navigation on the Hudson River. During the summer of 1924 she was in continuous operation in towing large fleets on the Hudson. During the winter time, this boat is placed in general harbor duty and undertakes any work a steam-boat will handle.

CHASER—Lighter—Owned by Merritt, Chapman & Scott Corporation, New York City. Commissioned, 1923. Length Over All 68', Beam 17'5", Draft 6'3", speed 8.3 knots. Powered with one 120 Shaft Horse Power direct reversible Nelseco Diesel engine. The *Chaser* is used exclusively in New York Harbor and serves as water tender and general supply boat for the Merritt, Chapman & Scott Corporation's fleet of vessels.

ELIZABETH EDWARDS—Fishing vessel—Owned by Edwards Brothers, Easthampton, Long Island. Commissioned, 1924. Length Over All 90', Beam 21'6", Draft 7', speed 9.3 knots. Powered with one 180 Shaft Horse Power direct reversible Nelseco Diesel engine. The *Elizabeth Edwards* was formerly equipped with a gasoline engine and is now engaged in Menhaden fishing on the Sound and off-shore in the vicinity of Montauk Point. The owners report very satisfactory service and greatly reduced fuel costs when compared to gasoline.

WM. J. CONWAY, JR.—Tugboat—Owned by Stanwood Towing Company, New York City. Commissioned, 1924. Length Over All 50', Beam 14'3", Draft 7'. Powered with one 120 Shaft Horse Power direct reversible Nelseco Diesel engine. This tug was placed in service in July, 1924, and has been continuously engaged in towing and general harbor work in New York Harbor and Sheepshead Bay. The ability of this small tug to handle one or two heavy barges has been favorably commented upon by men interested in the tow boat industry.

FABIA—Trawler—Owned by John Chisholm & Son, Gloucester, Mass. Built in 1920. Length Over All 140', Beam 25', Draft 14', speed 10½ knots. Fish capacity 300,000 lbs. Powered with one 360 Shaft Horse Power direct reversible Nelseco Diesel engine. Since being built at East Boothbay, Maine, the *Fabia* has been in steady service between Gloucester and the Newfoundland Grand Banks. She is considered one of the "high liners" of the Gloucester fleet and is always one of the first to bring the catch to market. She is one of 3 fishermen, all of which are equipped with Nelseco engines and owned by John Chisholm & Son.

MAGNET—Lighter and Tow Boat—Owners—Valvoline Oil Company, New York City. Converted, 1923. Length Over All 90', Beam 18'2", Draft 6'6", speed 10 knots. Powered with one 180 Shaft Horse Power direct reversible Nelseco Diesel engine. Conversion of the *Magnet* from gasoline to Diesel power was made at the New London Ship & Engine Com-



THE "MUNNATAWKET," NOW POWERED BY A NELSECO DIESEL, SHOWING ADDED POWER AT A REDUCED OPERATING COST



THE DIESEL TUG "JUMBO." THIS IS THE LARGEST DIESEL-POWERED TOWBOAT IN THE UNITED STATES AND IS EQUIPPED WITH A 600 SHP NELSECO DIESEL OIL ENGINE. OWNED BY THE CORNELL STEAMBOAT COMPANY.

pany's plant, Groton, Conn. Since being re-engined she has been in continuous service and has been engaged in delivering the Company's oil products in New York Harbor and along the Sound. The owners report excellent satisfaction and greatly reduced fuel and lubricating oil costs.

LION—Tugboat—Operated by Transmarine Corporation, New York City. Commissioned, 1925. Length Over All 103', Beam 20', Mean Draft 11'. Powered with one 600 Shaft Horse Power direct reversible Nelseco Diesel engine. The *Lion* is a sister ship to the *Jumbo* and has just been placed in commission in New York Harbor. She will engage in all kinds of harbor towing, such as docking ships, car float service, barge and general handling work.

The Following Vessels are Now Undergoing Conversion to Nelseco Diesel Drive

CHARLIE LAWRENCE—Tugboat—Owners—Cornell Steamboat Company, New York City. Length Over All 80', Beam 17'3", Draft 8'. The *Lawrence* is now undergoing conversion at the plant of the Cornell Steamboat Company, Kingston, New York, and a 330 Shaft Horse Power Nelseco Diesel engine is being installed. When conversion is completed, it is expected that the *Lawrence* will be used on the Hudson during the navigation season as the "helper" boat in connection with Cornell's big tows.

JACOB M. HEATH—Tugboat—Owned by Stanwood Towing Company, New York City. Length Over All 65', Beam 16'6", Draft 7'. The *Heath* is now undergoing conversion from steam to Diesel power at the plant of the New London Ship & Engine Company, Groton, Conn. This boat will be equipped with one 220 Shaft Horse Power, direct reversible Nelseco Diesel engine and will be later engaged in towing in the vicinity of New York Harbor.

JAMES M. BROOKS—Tugboat—Owned by Louis O'Donnell, New York City. Length Over All 77', Beam 20', Draft 9'. The *James M. Brooks* is now undergoing conversion from steam to Diesel drive and will shortly have installed one 300 Shaft Horse Power direct reversible Nelseco Diesel engine. It is expected that she will be placed in commission May first, 1925, and will immediately go into service on the New York State Barge Canal and operate between Buffalo and New York City. Upon closing of the Canal, the *Brooks* will be excellently adapted for general New York Harbor service.

A more detailed account of each of the above installations will appear from time to time.

POR T NEWARK A NATIONAL ASSET

(Continued from page 3)

really efficient for the handling of the nation's foreign-bound and coast-wise commerce, it is necessary that, instead of a channel, the whole bay be dredged to a depth of thirty feet from pierhead to pierhead. There will then be created what an old sea captain once described as a "Shipmaster's Paradise." The Bay is about four miles long by approximately 7,000 feet in width and the whole shore front on both sides should be available for national maritime purposes. The expense is justified, not because of the desire of the cities of Newark or Elizabeth, or even of the states of New Jersey or New York. It is justifiable because the producers of the Pacific Coast, of the Gulf States and of the State of Florida are now sending their product by ship direct to Port Newark. It is not for the sake of Newark only that these improvements should be effected, but for the sake of the people who produce from the one state of Texas alone over \$4,000,000,000 worth of commodities in one year and who, because of their great distance by railroad, are forced to use water transportation. It is for their sake, I repeat, even more than our own, that the country has to provide safe and easy access for these producers to a constant and profitable market. Still more strongly does this argument apply to Pacific coast producers.

Port Newark is no more a vision—it is in actual existence with great ships plying in and out of her waters every day carrying thousands of tons of raw material to the city's industrial plants, and finished products bearing the stamp "Made In Newark" to the world's markets.

INLAND WATERWAY PROGRESS

(Continued from page 4)

ment. It seems absurd, but one of the arguments we used for the awakening of the East, was the fact that the appropriation for the maintenance of the Arthur Kill was only \$5,000 per annum.

All this is now changed. The problems around the great port of New York are such that

a Port Authority has been constituted and is actively in service endeavoring to meet the problems that traffic congestion create.

The wonderful possibilities of Newark Bay have not only been rediscovered, but put upon the map. I am not romancing when I say that the early inspirational meetings of this Association led to an agitation for the utilization of Newark Bay and resulted finally in "Port Newark," a municipal development with Federal assistance, that is at last bringing into service one of the finest harbors in the United States, so close to New York as to have been long neglected but now coming forward on its own merits as one of the most serviceable of American ports.

Newark is a great industrial city, greater than it gets credit for, for the reason just stated, but since this Port Newark agitation, things are different. The new facilities and conveniences provided for industrial establishments as well as for homes, are making Newark better known for the city of industry and substance that it really is.

IMPORTANCE OF WATERWAY DEVELOPMENT TO NEWARK

(Continued from page 6)

tion of several hundred acres of marshland thus creating millions of dollars in ratables which will soon be covered with the mammoth plants and mills of industry, with the great ships of commerce docking at their wharves.

So important is Newark Bay as a port of entry that an additional appropriation was made by Congress last year and approved by the War Department to provide for further widening and deepening of the channel. This work is now being done by the Government and when completed will give to Newark a channel 400 feet in width with a depth of 30 feet at mean low water.

All of the Subsidiaries of the Submarine Boat Corporation maintain a staff of engineers and men expert in their particular line who are always at your service to help solve your problems, large or small.

ED



ALTERNATING CURRENT

Squirrel Cage Induction Motors
High Torque Squirrel Cage
Induction Motors
Constant Speed Slip Ring Induction
Motors
Variable Speed Slip Ring Induction
Motors
Motors for Cranes and Hoists
Back Geared Induction Motors
Vertical Induction Motors
Interpole Motors

DIRECT CURRENT

Interpole Generators
Motor Generator Sets
Constant Speed Motors
Adjustable Speed Motors
Elevator Motors
Crane Motors
Machine Tool Motors
Submarine Motors
Marine Type Motors
Car Lighting Equipment

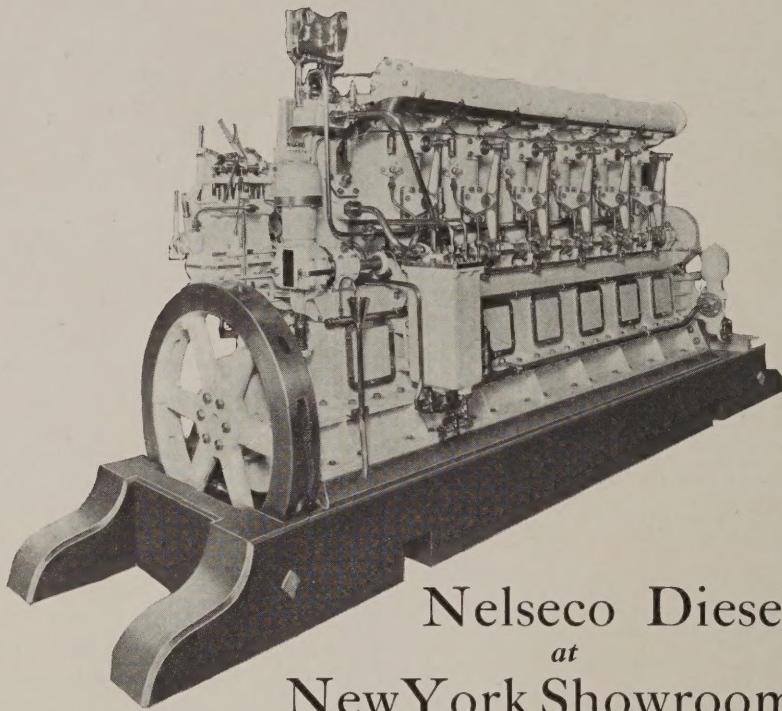
Sizes include $\frac{3}{4}$ H.P. to 750 H. P.

Write for Catalog

ELECTRO DYNAMIC COMPANY
BAYONNE, NEW JERSEY

Branch offices in all large cities

ELECTRO DYNAMIC MOTORS



Nelseco Diesel at New York Showroom

NELSECO is the pioneer American Diesel, a proven heavy oil-engine designed to withstand the rigors of marine work. It is economical in operation and requires little expense for maintenance or repairs. Nelseco engines are designed in sizes to meet the requirements of the various types of power craft. They have been used for a decade in the fishing and towboat industries of the Atlantic and Pacific Coast.

In order to provide the marine industry of New York district with an opportunity of studying the advantages that the Nelseco Diesel offers, The New London Ship & Engine Company has placed an engine on display at Port Elco, its New York Showroom. There is a Nelseco engineer on hand to explain why the Diesel engine is most efficient marine power agent yet devised.

*Standard sizes from 120 H. P. to 900 H. P.
Let us recommend the size for your need.*

New London Ship & Engine Co.

GROTON, CONNECTICUT

New York Showroom: Port Elco
247 Park Ave. and 107 E. 46th St.





TRANSMARINE LINES PORT NEWARK (N.Y. HARBOR)

Weekly Sailings To the Gulf and to the Pacific Coast

Intercoastal—Every Tuesday

A Transmarine Line ship leaves Port Newark for the Pacific Coast Ports of Los Angeles, San Francisco and Oakland. No intermediate stops are made on the Atlantic Coast.

Gulf—Every Saturday

A Transmarine Line ship leaves Port Newark for the Gulf, with a weekly service to Beaumont, Texas. Northbound, all "T" Line ships stop at Mobile and Pensacola.

Exceptional terminal facilities at Port Newark. Direct rail and ship connections. Unlimited open storage space, three warehouses of modern design. Dock 4,000 feet long equipped with electric cranes, 70-ton lift gantry for heavy pieces.

Write for Sailing Schedule

Steamship Terminal
Port Newark, N. J.

New York Office
5 Nassau Street

Sailings subject to change or postponement without notice

DEPENDABLE
AND
EFFICIENT
SERVICE
TO
Gulf and West Coast

Your Calendar is our Sailing Card



3 0112 072821728

PORT & Elco



Permanent Motor Boat Display

PORT ELCO, located in the heart of the hotel and shopping district of New York City, is the finest motor boat showroom in the world. Elco motorboats of every type can be inspected, each boat complete and fully equipped just as they are delivered to the customer. The boats on display are the famous Criterette, the speedy Veedette, the large 45-foot Cruiser, the palatial Deck House Cruiser, and the new 26-foot Cruiser.

Visit Port Elco. Those in charge are experienced boatsmen and you can rely on their advice

THE ELCO WORKS

DIV. OF SALES AND EXHIBIT: PORT ELCO
247 Park Ave. and 107 E. 46th St.
New York City

PLANT AND YACHT BASIN
Bayonne, New Jersey
(On Newark Bay)

The Haven of

PORT
& Elco

Yachtsmen